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10/708,398	03/01/2004	Meng-Tsung Lo	MSCP0021USA	2397
27765	7590	07/12/2007		
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION			EXAMINER	
P.O. BOX 506			KHOLDEBARIN, IMAN K	
MERRIFIELD, VA 22116			ART UNIT	PAPER NUMBER
			3737	
			NOTIFICATION DATE	DELIVERY MODE
			07/12/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com  
Patent.admin.uspto.Rcv@naipo.com  
mis.ap.uspto@naipo.com.tw

## Office Action Summary

Application No.

10/708,398

Applicant(s)

LO ET AL.

Examiner

I Kenneth Kholdebarin

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/12/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed Dec 12, 2006 have been fully considered but they are not persuasive.

2. After further consideration of the applicant's argument, examiner respectfully disagrees. In regards to applicant's remarks on page 7, applicant argues that Miele et al. does not anticipate all of the claimed limitations contained in claim 1 and 3.

More specifically, applicant argues that "pulse stress signals is different from the heartbeat frequency of the examinee and Miele does not teach the limitation of the above claims".

Examiner would like to further clarify that Miele teaches, in step 306 and 307, a decreasing applanation sweep of the selected artery is commenced. The applanation sweep begins by over compressing the artery against the underlying bone (or other rigid member) using the aforementioned pressure transducer such that a cross section similar to that shown in FIG. 2 is obtained. As the sweep progresses, the compression of the artery is gradually reduced until the artery is ultimately not compressed at all. (Also see Fig. 3A and paragraph 0075). In view of examiner sweeping progress of pulse stress signals clearly shows the difference between the heartbeat frequency and the transducer frequency. Therefore, the examiner maintain previous rejection dated November 03, 2006 and repeated below, in addition claims 2 and 5 are dependent of claim 1 and 3.

**Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-3 as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Miele (Patent Publication 2002/0055680 A1).

Re Claim 1: Miele discloses:

an ultrasonic vein detector for detecting the position of a vein in a specific part of an examinee / wrist (See fig. 6), the detector comprising:

an ultrasonic emitter / ultrasonic transducer (604) having an oscillator (620) for generation indicative pulse ultrasonic signals toward the examinee (see paragraph [0103]);

a pulse presser / brace pulse transducer (1000) for applying pulse stress signals to the part of the examinee / skin (606) (See paragraph [0098]), with different frequency of the heartbeat;

an ultrasonic sensor / ultrasonic transducer (604), for sensing the back waves which is the reflection of the indicative pulse ultrasonic signals hitting every reflecting point of the

part of the examinee (see paragraph [105]), and converting them into electrical signals / step 2006, fig. 20 (See paragraph [0169]), and an inherent microprocessor for receiving the electrical signals from the ultrasonic sensor and calculating the Doppler shift of the electrical signals generated from the back waves in order to find the reflecting points corresponding to the pulse stress signals (See paragraph [0021] and [0075]).

The “transducer” used by Miele is meant to include any type of sensor capable of sensing /receiving one parameter and generation or transmitting a signal based thereon, or alternatively capable of receiving a signal and generating some physical response thereto (see paragraph [0098]).

Re Claim 2: Miele discloses storage / digital signal processing devices (610) to perform digital signal processing requires storing the data for conversion, for storing the electrical signals outputted by the ultrasonic sensor (604), (See fig. 6, also paragraph [0075] and [0099]).

Re Claim 3: Miele discloses a method comprising:

(a) emitting an indicative pulse ultrasonic signal toward the examinee from an emitting point; the ultrasound transducer (604) will perform the aforementioned method step (See fig. 3A, step 308, also paragraph [0075]);

(b) applying pulse stress signals on the examinee, wherein the frequency of the pulse stress signals is different to the frequency of the pulse ultrasonic signal and the heartbeat

of the examinee; the pressure transducer (602) will perform the aforementioned method step. (See fig. 3A, step 308, also paragraph [0075]);

(c) sensing a back wave which is the reflection of the indicative pulse ultrasonic signals hitting from the part of the examinee and converting it into an electrical signal; the ultrasound transducer (604) will perform the aforementioned method step (See fig. 3A step 310, also paragraph [0075] and [0100]);

(d) calculating the Doppler shift of the electrical signal generated from the back wave in order to find the reflecting point corresponding to the pulse stress signal (See fig. 3A step 312, also paragraph [0075]).

3. In regards to applicant's remarks on page 7, applicant argues that Miele et al. does not teach the limitation of claim 4.

More specifically, applicant argues, " paragraph [0008] or other sections of Miele et al. does not suggest that the pulse stress signal is non-periodical".

Examiner would like to further clarify that Miele teaches in paragraph [0008] the term "applanation" refers to the process of varying the pressure applied to the artery. An applanation sweep refers to a time period during which pressure over the artery is varied from overcompression to undercompression or vice versa. In view of examiner sweeping and varying the pressure could be non-periodic in the art. Therefore, the examiner maintain previous rejection dated November 03, 2006.

**Claim Rejections - 35 USC § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 4 as understood, is rejected under 35 U.S.C. 102(b) as being anticipated by Miele (Patent Publication 2002/0055680 A1).

Re claim 4: Miele discloses method for the pulse stress signal to be non-periodic (See paragraph [0008]).

**Claim Rejections - 35 USC § 103**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miele.



Although Miele fails to disclose or fairly suggest the method of calculating the time interval between emitting the indicative pulse ultrasonic signal and sensing the back wave and multiplied by the ultrasonic transmission speed, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to calculate the distance between the reflecting point and emitting point by conventional algorithm of velocity and time interval of ultrasonic signal in order to identify location and/or optimal position of, the transducer with respect to the artery.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

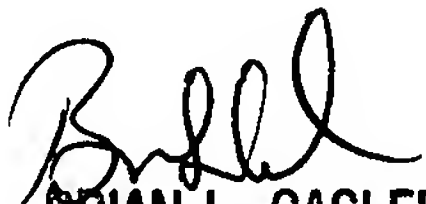


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to I Kenneth Kholdebarin whose telephone number is 571-270-1347. The examiner can normally be reached on M-F 8 AM- 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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06/21/2007

  
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